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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/529,255	04/11/2000	TAKANORI SHINOKI	2000-0465A	5270

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EXAMINER

BOYD, JENNIFER A

ART UNIT PAPER NUMBER

1771

DATE MAILED: 07/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/529,255

Applicant(s)

SHINOKI ET AL.

Examiner

Jennifer A. Boyd

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 9-20 is/are pending in the application.
- 4a) Of the above claim(s) 12-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9 - 11 and 17 - 20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Response to Amendment***

1. The Applicant's Amendments and Accompanying Remarks, filed April 24, 2006, have been entered and have been carefully considered. Claims 12 - 16 are withdrawn and claims 9 - 20 are pending. In view of Applicant's Declaration which demonstrates that EP043 has a double refraction of 0.147 rather than the claimed greater than 0.170, the Examiner has revised the previously applied rejection below. The invention as currently claimed is unpatentable for reasons herein below.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 112***

3. Claims 9 and 18 remain rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 10 - 11, 17 and 19 - 20 remain rejected as being dependent on rejected claims 9 and 18. Please see details in previous Office Action.

***Claim Rejections - 35 USC § 103***

4. Claims 9 - 11 and 17 - 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goettmann (US 5,851,355).

Goettmann is directed to a reverse osmosis support substrate and method for its manufacture (Title).

Goettmann teaches support substrate comprising 0 – 60% of a second polyester staple fiber having a denier greater than first polyester staple fiber but still in the range from 0.2 – 3.0, 15 – 50% by weight of a first binder fiber and 1 – 10 % by weight of a second binder fiber (column 3, lines 55 – 67). Goettmann teaches the use of 40.7 % by weight of Type 108 polyester staple fibers supplied by Hoechst/Celanese as the second polyester staple fibers (column 4, lines 15 – 20). The Examiner equates the second polyester fibers to Applicant's "polyester fiber" and first and second binder fiber to Applicant's "binder fiber". Goettmann teaches that the sheet porosity is in the range between 5 – 10 cfm (column 3, lines 1 – 10). According to [www.frazierinstrument.com](http://www.frazierinstrument.com), the air permeability value of 5 – 10 cfm can be converted to Applicant's units of cc/cm<sup>2</sup>s by multiplying cfm by 0.508. Therefore, 5 – 10 cfm is equivalent to 2.54 – 5.08 cc/cm<sup>2</sup>s. The nonwoven is made by a wet-laying process and then thermally bonded under controlled temperature and pressure conditions (column 4, lines 20 – 34). Goettmann teaches that a thin film of polysulfone is attached to the nonwoven support substrate (column 6, lines 45 – 55) as required by claims 17 and 18.

As to claim 11, it should be noted that the most common type of polyester is polyethylene terephthalate, so it is the position of the Office that the polyester of Goettmann would be polyethylene terephthalate. According to Applicant's Specification on pages 13 – 14, polyethylene terephthalate meets the chemical limitations of claim 11.

As to claims 19 – 20, Goettmann teaches that the substrate can be thermally calendared with rolls heated in the range from 385 – 435 degrees F (196 - 224 degrees C) (column 5, lines 30 – 36).

Goettmann discloses the claimed invention except for that the pore size is 42 micrometers or less as required by claims 9 and 18 and that the polyester fiber is present in the amount of 50 – 70% by weight as required by claim 10. It would have been obvious to one having ordinary skill in the art at the time the invention was made to create a support member having a maximum pore size of 42 micrometers or less and have a polyester fiber present in the amount of 50 – 70% by weight since it has been held that where general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454 USPQ 233 (CCPA 1955). In the present invention, one would have been motivated to optimize the pore size and polyester fiber content to create a support member with optimal permeability and desired properties.

Although Goettmann does not explicitly teach the claimed double refraction of 0.170 or more, a heat shrinkage stress at 200 degrees Celsius of 0.10-0.60 g/d and a mean value of breaking length at an elongation of 5% in a lengthwise direction (MD) and a crosswise direction (CD) of 4.0km or more, it is reasonable to presume that double refraction of 0.170 or more, a heat shrinkage stress at 200 degrees Celsius of 0.10-0.60 g/d and a mean value of breaking length at an elongation of 5% in a lengthwise direction (MD) and a crosswise direction (CD) of 4.0km or more is inherent. Support for said presumption is found in the use of like materials (i.e. substrate comprising 0 – 60% of a second polyester staple fiber having a denier greater than first polyester staple fiber but still in the range from 0.2 – 3.0, 15 – 50% by weight of a first binder fiber and 1 – 10 % by weight of a second binder fiber having an air permeability between 2.54 – 5.08 cc/cm<sup>2</sup>s) which would result in the claimed properties. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed properties of

double refraction of 0.170 or more, a heat shrinkage stress at 200 degrees Celsius of 0.10-0.60 g/d and a mean value of breaking length at an elongation of 5% in a lengthwise direction (MD) and a crosswise direction (CD) of 4.0km or more would obviously have been present once the Goettmann product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977).

Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same or an obvious variant from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). The burden has been shifted to the Applicant to show unobvious differences between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289, 292 (Fed. Cir. 1983).

#### ***Response to 37 CFR 1.132 Declaration***

5. In regards to Applicant's 37 CFR 1.132 Declaration, the Examiner has found Applicant's evidence persuasive concerning the double refraction of the EP043 fiber. The Applicant found that the double refraction of the EP043 fiber is 0.147 while Applicant claims 0.170 or more in claim 1. The Declaration has found to be persuasive. Please see the newly revised rejection above.

#### ***Response to Arguments***

6. Applicant's arguments filed April 24, 2006 have been fully considered but they are not persuasive.

Applicant argues that the 35 USC 112, first paragraph rejection of claims 9 and 18 as failing to comply with the written description requirement. Applicant indicates that “except for conjugate fiber” is supported by the Specification because on page 15, line 20 of Applicant’s Specification, it is stated that the polyester fiber “may be conjugate fibers”. Applicant argues that *Ex Parte Grasselli* is not relevant to the present facts because in that case there was no literal support in the Specification. According to the notes associated with *Ex Parte Grasselli*, it was stated by the Board that “Despite appellants’ arguments to the contrary, we agree with the examiner’s position of record that the negative limitations recited in the present claims, which did not appear in the specification as filed, introduce new concepts and violate the description requirement of the first paragraph of 35 U.S.C. 112. *In re Anderson*, 471 F.2d 1237, 176 USPQ 331 (CCPA 1973). The examiner’s distinctions between the present case and the prior decisions cited by appellants are correct and we adopt his position in that regard as our own. It might be added that the express exclusion of certain elements implies the permissible inclusion of all other elements not so expressly excluded. This clearly illustrates that such negative limitations do, in fact, introduce new concepts.” The Examiner submits that a negative limitation not literally described in the Specification, such as claimed by Applicant, does violate the description requirement of first paragraph 35 U.S.C. 112. The rejection is maintained.

Applicant argues that Type 108 polyester fiber is easily expected to be of the same type of polyester fiber EP043, which is a conventional fiber not having the claimed double refraction. The Examiner submits that the Applicant’s arguments cannot suffice as evidence. The Examiner understands that Type 108 polyester fiber is no longer available in the market according to Applicant and therefore the Applicant cannot conduct an experiment to show that the fiber has a

double refraction outside the claimed range. However, it cannot be assumed that Type 108 polyester has a similar double refraction as EP043 without evidence. Furthermore, the Applicant cannot make an assumption about the dimensional stability without knowing the level of orientation. Similarly, the Applicant cannot make an assumption about the heat shrinkage stress based on the presumption that Type 108 polyester staple fibers do not have a double refraction of 0.170 or more. It is suggested that the Applicant provide additional claim limitations to differentiate the prior art product from the claimed invention.

Applicant argues that the preferred embodiment shows that the mean value of breaking length at an elongation of 5% in lengthwise direction of Goettmann is 1.15 km while Applicant claims 4.0 km or more. Although the preferred embodiment may indicate a mean breaking length at an elongation of 5% is 1.15 km, Goettmann indicates that the preferred embodiments are not intended to limit the scope of the claims and that the physical properties as well as the performance of the sheet material can be altered to fit a particular set of physical specifications (column 6, lines 20 - 45). Furthermore, it should be noted that disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments. *In re Susi*, 440 F.2d 442, 169 USPQ 423 (CCPA 1971). Also, the brochure shows the breaking length of a fabric made from 60% EP043 and 40% EP101, which is not commensurate in scope with the fabric of the claims or the fabric of Goettmann.

Applicant argues pore size of 42 micrometers or less cannot be achieved even if the nonwoven fabric has an air permeability within the present invention. Applicant indicates that the Declaration in response to Shinjo is relevant to overcome the Examiner's reasoning based



upon Goettmann. The Examiner does not find this persuasive because the Applicant has not shown evidence that *Goettmann* does not have a pore size of 42 micrometers or less.

Applicant argues that Goettmann is not enabling as prior art. It should be noted that, according to MPEP 1701, every patent is presumed to be valid. Public policy demands that every employee of the United States Patent and Trademark Office (USPTO) refuse to express to any person any opinion as to the validity or invalidity of, or the patentability or unpatentability of any claim in any U.S. patent, except to the extent necessary to carry out (A) an examination of a reissue application of the patent, (B) a reexamination proceeding to reexamine the patent, or (C) an interference involving the patent. The question of validity or invalidity is otherwise exclusively a matter to be determined by a court. Furthermore, the Applicant has not provided facts instead only arguments rebutting the presumption of operability. *In re Sasse*, 629 F.2d 675, 207 USPQ 107 (CCPA 1980).


Applicant indicates that a nonwoven fabric cannot be prepared according to Goettmann. The Examiner considers the experiment to not be relevant because the Applicant did not perform the experiment over the range of temperatures, pressures and fiber proportions to establish inoperability over the disclosed ranges of the invention of Goettmann. Furthermore, the Applicant did not exactly replicate the experiment of Goettmann.

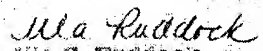
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Boyd whose telephone number is 571-272-1473. The examiner can normally be reached on Monday thru Friday (8:30am - 6:00pm).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Jennifer Boyd  
July 7, 2006

  
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